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ABSTRACT

A mounting degree of language contact between the linguistically related varieties of Frisian and Dutch might undermine the structural integrity of Frisian. Focusing on the suffixation paradigm, this study explores how and to what extent this is occurring. Data gathered for this research is part of a larger project concerning Frisian as a first and second language among primary school children (Ytsma, 1991). Subjects were 208 students in grade 5 and 202 students in grade 8; 202 were Frisian-speaking and 208 spoke Dutch at home. Schools were categorized according to language environment, or language contact situations. Subjects completed an oral elicitation test that examined diminutive formation, and questionnaires measuring language attitudes and motivation. Findings support the argument that the Frisian children achieve reasonably well on the diminutive formation test. The oldest Frisian children (grade 8) perform slightly better than those in grade 5. The Dutch children applied the Frisian diminutive forms with great difficulty and the variability of their test scores is relatively high. Dutch children in the most prominent Frisian language environment generally achieved better than those in less Frisian environments. Dutch children generally displayed a fairly negative attitude toward Frisian and were poorly motivated to learn the language. (Contains 37 references.) (JP)

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FRISIAN DIMINUTIVE FORMATION AMONG FRISIAN AND DUTCH PRIMARY SCHOOL CHILDREN*

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1. INTRODUCTION

The present study is about the acquisition or non-acquisition of the traditional Frisian diminutive formation system among Frisian and Dutch primary school children. An imperfect acquisition of the diminutive formation system among Frisian children may signal a process of *language loss* of the minority language. A mounting degree of language contact between the linguistically related varieties Frisian and Dutch might undermine the structural integrity of Frisian. Focussing on the suffixation paradigm, this study explores how and to what extent this happens.

On the other side, the acquisition of the Frisian diminutive formation system among non-Frisian children is of interest. Most often, second language acquisition studies center on the acquisition of prestigious languages. By paying attention to the acquisition of Frisian as a second language, I counterbalance this biased state of affairs. To the degree in which Frisian is acquired as a second language, one has to do with an opposite development of the process of language loss, which I provisionally label here as *'language gain'*.

Before presenting the research questions which have guided this study, I will first provide some general introductory information on the Frisian case and, more specifically, on diminutive formation in Frisian, Dutch and some Dutch dialects.

Friesland has witnessed a strong demolinguistic process of 'Dutchification' in the last few decades. In the early Eighties, Frisian was the home language for 59% of the provincial population whereas in the Fifties it was still the home language for 71% of the inhabitants (Gorter et al. 1984:15). Migration has been the major cause of Dutchification. Many non-Frisian immigrants settled down in the Frisian countryside. At the same time, many Frisians migrated to the towns in the province, which had a non-Frisian character of old. The result of both processes was a rapid and sizeable change in the province's linguistic geography. Broadly speaking, Friesland became linguistically more heterogeneous.

Such a rapid and important demolinguistic Dutchification will most likely co-occur with a 'Dutchification' of the Frisian language itself (cf. Breuker 1979; De Haan 1990; Sjölin 1976). It seems highly implausible that massive language contact will not affect the less powerful variety, for processes of language *shift* and language *loss* tend to go hand in hand (cf. Appel and Muysken 1987:45). An imperfect acquisition of the language by Frisian children may signal such changes. The acquisition of the mother tongue presumably differs according to the degree of 'Frisianness' of the environment, for a Frisian child located in a predominantly Dutch (school) environment will supposedly be exposed to potent subtractive Dutch influences.

Moreover, as many native speakers of Dutch live nowadays within the borders of Friesland, it is also appropriate to examine the level at which they acquire Frisian as a second language. The factor of language environment can be conceived

as a key contributor to variation in acquisition, as a chiefly Frisian environment implies frequent exposure to the language. Next to the language environment, social-psychological variables such as attitude and motivation arguably relate to the non-Frisians' acquisition or non-acquisition of the minority language. It is currently argued that the rate of *SLA* is partly predictable by social-psychological variables (cf. Larsen-Freeman and Long 1991:172-184). It may well be the case that especially variation in the *L2*-acquisition of a minority language strongly depends on the social-psychological demeanour of the second language learner, for a less prestigious variety often has relatively little instrumental value.

Apart from other linguistic variables, diminutive formation has been mentioned as a major domain of potential grammatical borrowing of Frisian from Dutch (De Haan 1990:105). Diminutive formation is said to be very productive in Frisian (Tiersma 1985:61). Diminutives are formed by suffixation, whereby the allomorphs **-/ke/**, **-/tsje/** or **-/je/** are added to the noun stem. The most recent Frisian grammar gives the following rules (Tiersma 1985:59):

-/ke/ is appended to a stem ending in a vowel or diphtong, or in [m p f s r];
-/tsje/ is the suffix following [l n t d];
-/je/ is used after a stem which terminates in the velars [k x y]. The /ng/ becomes /nk/ before the diminutive.

It should be added that, according to De Haan (1990:109), the Frisian system has two basic forms, -/ke/ and -/tje/. In contrast, standard Dutch only has -/tje/ as underlying suffix (Cohen 1958; Trommelen 1983) which is realized in different surface forms. In the present study, the above three rules served as the 'standard' Frisian diminutive system.

Thus far, there are no research data available on Frisian children's acquisition of Frisian diminutive formation. The only empirical study on the acquisition of the Frisian diminutive system has been carried out among non-Frisian children (Boelens 1987). It was demonstrated that they applied the Frisian diminutive forms with great difficulty.

Similarly, there have been relatively few studies into the acquisition of Dutch diminutive formation among Dutch children. Schaerlaekens and Gillis (1987) locate the acquisition of Dutch diminutive formation by Dutch children between the ages of 2.5 and 5. Broadly speaking, results from a study of Extra (1978) underline their position. Moreover, Moenaert (1983:93) found that about 1/4 of Flemish pre-schoolers still made a considerable number of errors in use of the regular diminutive suffixes. Furthermore, an experimental study of Den Os and Harder (1987) put forward that the rules for the formation of diminutives were learned later than those for the plurals. The rules for diminutive formation were learned at the age of 8 or 9. Finally, Snow, Smith and Hoefnagel-Höhle (1980) demonstrated that twelve-year-old Dutch children had completely acquired the rules of Dutch diminutive formation, while seven-year-old Dutch children had not yet done so.

In sum, the above-mentioned studies into Dutch children's acquisition of Dutch diminutive formation suggest that the system is mastered at the end of primary school, that is, at the age of 12.

In contrast to the number of studies into children's acquisition of the Dutch diminutive system, there have been quite a few Dutch dialect studies in which the formation of diminutives is dealt with in terms of dialectical loss. The first national dialect-geographical study into the spread of certain diminutive suffixes in the Dutch language area was carried out in the Thirties by Pée (1936, 1938). Pée came to the conclusion that there was a general process of dialectical replacement of -/ke/ by -/tje/ (Pée 1936:59). There are several more recent dialect studies which likewise pay attention to the formation of diminutives. Among these are the studies of De Bont (1962) concerning the *Kempenland* dialect, Hoppenbrouwers (1978) on the dialect of *Westerhoven*, Reker (1983) and Wierenga (1986) on the *Groninger* dialect, Van Bree (1985) on the dialect of *Twente*, Münstermann and Hagen (1986) on the dialect of the city of *Maastricht* and Van Hout (1989) on the

urban dialect of *Nijmegen*. The outcomes of these studies seem somewhat inconclusive. In the study on the vernacular of *Maastricht*, it was concluded, for instance, that the formation of dialect diminutives was quite resistant (Münstermann and Hagen 1986:83). Contrary to these findings, a massive dialectical loss of the traditional -/ke/ suffix (or a variant hereof) was found in the urban dialect of *Nijmegen* (Van Hout 1989:223-224).

As distinct from the number of Dutch dialect studies, loss of Frisian diminutive formation has been empirically studied only by Breuker (1982) and Koornstra (1987). Both studies included highly non-representative and small subject groups. Breuker concluded that there is a general process of replacement of -/ke/ by -/tsje/ in linguistic contexts where Dutch has -/tje/. He ascribed this development to external Dutch influences, that is, to the language contact between Frisian and Dutch. In contrast, De Haan (1990) interprets the same development in terms of an internal language change: the -/tsje/ class enlarges at the cost of the -/ke/ class.

Koornstra's study dealt, among others things, with diminutive formation among Frisian inhabitants of the village of *Aldehaske*. The subjects (*n*=35) were divided into three age groups, 14-21 yrs (12 *Ss*), 29-48 yrs (12 *Ss*) and 56-76 yrs (11 *Ss*). The study included 20 words, twelve ending in -/r/ and 8 in vowels. Koornstra found that the standard -/ke/ suffix was applied in 85% of the words ending in -/r/ and in 63% of those ending in vowels (Koornstra 1987:54). A re-analysis of Koornstra's data revealed a tendency for younger Frisians to apply less standard forms, but the intergenerational differences were not statistically significant[1].

Research questions

The study reported here is part of a large-scale research project on Frisian as a first and second language among primary school children (cf. Ytsma 1991). A small portion of all data gathered within the framework of this project will be dealt with here. With an eye to the above introductory remarks, this study addresses the following research questions:

1a To what extent do Frisian primary school children realize standard Frisian diminutive forms and what are the main deviations from this norm?
1b Does their performance relate to their age, gender and language environment?
2a To what extent are Dutch primary school children able to realize standard Frisian diminutive forms?
2b Does their performance relate to their age, gender and language environment?
2c Does their performance relate to their attitudes towards Frisian and towards their motivation to learn the language?

2. METHOD

2.1 Subjects

All in all, 410 primary school children participated in the study. The sample included two age groups. There were 208 5th grade pupils, while grade 8 contained 202 children. The sample consisted of 197 boys and 213 girls. Of all children, 202 were Frisian-speaking and 208 spoke Dutch at home. Language background was determined by two different indices which had to match. First, teachers were asked to indicate the home language of the children (other-report). Second, the children defined their home language (self-report). Only in a very few cases, there was a mismatch between both indices.

The schools which took part in the study can be divided into three categories according to 'language environment':

A: population 10-25% Frisian pupils
(7 schools, *n*=110)
B: population 45-55% Frisian pupils
(10 schools, *n*=126)
C: population 75-90% Frisian pupils
(14 schools, *n*=174)

The 31 schools differ hardly at all as regards time expenditure on Frisian as school subject and frequency with which Frisian is used as medium of instruction. They teach Frisian as school subject in the middle and highest grades, but for no more than 45 minutes per week. One should note that diminutive formation does not form an explicit part of the curriculum. Frisian children spontaneously acquire the rules at home for the greater part. Likewise, the Dutch children acquire the Frisian diminutive system in an untutored way. Most likely, they do so predominantly by observation of native speakers of Frisian. Next to the teaching of Frisian as school subject, the schools also use Frisian as a medium of instruction. However, this is restricted to some 10 to 30% of the total instruction time.

Among the three school categories, the principal difference is in the language environment. The language environments comprise differing language contact situations. For the Dutch children at the A-schools, there is little exposure to Frisian as a second language. For the Frisian children, this category is characterized by massive contact with Dutch as a second language. At the C-schools the contact situations are reversed, and the B-schools take an intermediate position.

In school category A, diminutive formation was elicited among all Frisian children and among nearly the same number of Dutch children, who were selected at random. In category C, elicitation was carried out among all Dutch children and among an approximately equal number of Frisian children, selected at random. In category B, about half of the Frisian and Dutch children took part.

2.2 Diminutive formation

An oral elicitation test was carried out to measure diminutive formation. Elicitation was performed by means of pictures of 17 concrete nouns (singular). Of these, 11 would select the -/ke/ suffix, four -/tsje/ and the remaining two selected the -/je/ suffix. The experimenters were mainly Frisian-speaking teacher-training college students. They had been instructed to state the singular in Frisian and to ask for the Frisian diminutive form.

The reliability of the diminutive formation test has been investigated. As the test items were dichotomous, the Kuder-Richardson reliability test (*KR20*) was calculated. *KR20* turned out to be .86 for all children. For the Frisian children the reliability coëfficient amounted to .63 and for the Dutch children it was .80.

2.3 Language attitudes: Likert scale

A questionnaire was developed which consisted of 10 multiple-choice questions. The items dealt with Frisian television, the symbolic use of Frisian (on a sticker and on signs), Frisian as subject and as medium of instruction, the use of Frisian in everyday discourse, feelings of ethnicity, and an evaluation of Frisian in terms of its importance and its 'beauty'.

Three items contained four answer categories, while seven items included five answer categories. To minimise response set, half of the items had the most positive answer category on top, while the direction of the other items was reversed. Recodings were carried out appropriately.

2.4 Motivation: AMTB

Several items of Gardner's Attitude and Motivation Test Battery (*AMTB*) were selected and adapted (cf. Gardner and Smythe 1981; Gardner 1985:177-180). In relation to this, the questionnaire developed by Vousten, Bongaerts and Knops (1989) has been most helpful. The *AMTB* includes various items which focus on the motivation of the language learner. These deal with integrative and instrumental orientations. On 5-point scales, the children had to mark whether or not they agreed with the *AMTB* theses.

Factor analysis (*PCA*, varimax rotation) was carried out to determine the item loadings on the factor of motivation. It turned out that 6 (out of 10) items dealing with the Dutch children's integrative and instrumental orientation loaded highly on the second factor the factor analysis came up with. This factor was denoted as motivation. These 6 items, with their factor loadings, are listed below:

1 *If you can understand and speak the Frisian language, it will be a lot easier to find a job in Friesland later on. (.62)*
2 *If you can read and write in Frisian, it will be a lot easier to become famous in Friesland later on. (.72)*

3 *If you speak Frisian it is much easier to make friends. (.79)*
4 *You only fit in with the rest of the class if you can understand Frisian. (.66)*
5 *If you can read and write in Frisian, it will be a lot easier to find a job in Friesland later on. (.72)*
6 *If you can understand Frisian it is much easier to make friends. (.79)*

It is remarkably that the *AMTB* items which deal in principle with the integrative orientation (3, 4, 6) load on the same factor as the items covering the Dutch children's instrumental orientation (1, 2, 5). Therefore, one factor score has been calculated by summing the responses on the above items.

3. RESULTS

First of all, I will go into the Frisian and Dutch children's achievement on the diminutive formation test. The spread of scores gives a first impression hereof. This is represented in the first Table.

test score	Frisian (*n*=202)		Dutch (*n*=208)	
	#	%	#	%
0	-	-	2	1.0
1	-	-	10	4.8
2	-	-	7	3.4
3	-	-	5	2.4
4	-	-	5	2.4
5	-	-	15	7.2
6	-	-	15	7.2
7	-	-	15	7.2
8	2	1.0	14	6.7
9	3	1.5	20	9.6
10	10	5.0	23	11.1
11	8	4.0	15	7.2
12	17	8.4	23	11.1
13	21	10.4	20	9.6
14	29	14.4	10	4.8
15	48	23.8	4	1.9
16	37	18.3	4	1.9
17 (*max*)	27	13.4	1	0.5
	mean	14.3	mean	8.8
	sd	2.9	*sd*	3.9

Table 1: Scores on diminutive formation, for Frisian and Dutch children (# and %).

It is found that a portion of the Frisian children (13%) only realise standard forms in the diminutive formation test. Their performance is fully in agreement with the standard grammar. However, there are also two Frisian children who realise less then half of the potential cases in accordance with the grammar rules. Nevertheless, the figures in Table 1 show that the Frisian children generally achieve fairly well.

The means of the Dutch children (8.8) indicate that they apply the Frisian diminutive forms with considerable difficulty. This confirms earlier empirical findings (Boelens 1987). The relatively high standard deviation which we find with the Dutch children (3.9 vs. 2.9 for Frisian children) implies a greater *SLA*-variation compared to variability in mother tongue acquisition (cf. Wong-Fillmore 1991:61).

Next, I will examine the scores for each separate noun tested. The following table gives the outcomes per item.

item	suffix *Fr*/Du	Frisian (*n*=202)	Dutch (*n*=208)
blêd	*sje*/je	99.0	60.1
doarp	*ke*/je	98.0	48.1
boat	*sje*/je	97.5	63.9
glês	*ke*/je	97.5	55.8
blom	*ke*/+tje	97.0	70.2
fûgel	*tsje*/tje	97.0	68.3
skroef	*ke*/je	96.5	66.3
each	*je*/je	92.6	**78.8**
telefoan	*tsje*/tje	89.6	54.3
*skuor**	*ke*/tje	88.1	54.3
*ear**	*ke*/tje	84.7	49.5
knyptang	*kje*/+tje	79.7	29.3
*do/foto**	*ke*/tje	78.2	51.0
*stjoer**	*ke*/tje	77.2	51.4
*aai**	*ke*/tje	64.9	31.3
*trui**	*ke*/tje	54.5	30.3
*spiker**	*ke*/tje	**36.1**	**18.3**
mean:	-	84.0	51.8

*: Frisian suffix is -/ke/, while Dutch is -/tje/
+: schwa insertion
do: erroneously, several children did not respond to *do* (dove), but to the item *foto* (photo)

Table 2: Correct score per item, for Frisian and Dutch children (in %).

Table 2 again clarifies that the Frisian children generally respond reasonably well. Importantly, the table also shows large differences among the items tested. With the Frisian children, almost half of the items (8 out of 17) were at least 90% 'correct'. Their average overall correct score is fairly high (84%). A striking result is found for the item *spiker* (nail). This noun elicits more non-standard than standard suffixes among the Frisian children, a finding which is in accordance with earlier results reported by Koornstra (1987). She noticed 40% standard forms for the same item.

Worthy of mention is also the case of some Frisian children who displayed signs of insecurity. They corrected themselves. One Frisian child, for instance, responded to the item *aai* as follows: "*aitsje, nee... aike, ehh aike of aitsje, aike*".

The Dutch children's proficiency in the Frisian diminution system varies from 78.8% correct for the item *each*, which has the -/je/ suffix both in Frisian and in Dutch, to 18.3% for *spiker*, which also got the lowest score among the Frisian children. The Dutch children's mean overall correct score was comparatively low (51.8%). The most common error among the Dutch children consisted of the overgeneralized use of the typical -/ke/ suffix. This confirms earlier research findings (Boelens 1987:85).

Scrutinizing the non-standard forms ('errors') realised by the Frisian children reveals the following. First of all, it turns out that the two rules '-/**ke**/ appends to a stem ending in [m p f s]' and '-/**tsje**/ is the suffix following [l t d]' are generally well applied (see Table 2). Therefore, the items covering these instances are not included in the table below, which gives an overview of Frisian children's more systematic deviatons from standard grammar.

item	total # errors	error type (and #)
trui-ke	92	-/tsje/ (86) + -/tsi/ (1)
ai-ke	71	-/tsje/ (62) + -/tsi/ (3)
*do-ke**	44	-/tsje/ (36) + -/tsi/ (1)
spiker-ke	129	-/tsje/ (117) + -/tsi/ (9)
stjoer-ke	46	-/tsje/ (40) + -/tsi/ (3)
ear-ke	31	-/tsje/ (28) + -/tsi/ (1)
skuor-ke	24	-/tsje/ (19) + -/tsi/ (2)
telefoan-tsje	21	-/ke/ (18)
knyptan(g)-kje	41	-/etsje/ (10) + -/tsje/ (4) -/ke/ (15) + -/eke/ (1)
each-je	15	-/ke/ (13)

Table 3: Number of 'errors' and error types per item, for Frisian children.

[*Erroneously, several children did not respond to the item *do* (dove), but to the item *foto* (photo)]

The Frisian childrens' results underline Breuker's above-mentioned conclusion regarding the replacement of -/ke/ by -/tsje/ in contexts where Dutch has -/tje/. This applies, for instance, to the three items with the highest total number of non-standard suffixes, i.e. *spiker-ke*, *trui-ke* and *ai-ke*. Besides, it should be noted that sometimes the -/tsje/ suffix is realized as -/tsi/. This realization has also been observed as a variant of the standard -/tsje/ suffix (cf. Sipma 1966-:41; Tiersma 1985:17).

Interestingly, Pée's research from the Thirties (see Introduction) also contains some data on Frisian diminutive formation (Pée 1938:3-24; 63-69). Of special interest here are the nouns ending in -/r/. The noun *koer* (basket) got the -/ke/ suffix in all cases. However, 50 Frisian informants (81%) appended the -/ke/ suffix after *dochter* (daughter), whereas 12 (19%) used -/tsje/ in this context. Apparently, the observed replacement of -/ke/ by -/tsje/ among the Frisian school children is not just a recent process.

An interesting question is under which conditions the -/ke/ <> -/tsje/ replacement occurs. First of all, the -/tsje/ suffix is heard in those contexts where Dutch has -/tje/ (Breuker 1982). This points in the direction of a triggering effect of Dutch. In this sense -/tsje/ is Dutch-inspired. However, De Haan (1990) rationalizes the replacement by referring to internal system changes: the -/tsje/ class is enlarged at the cost of the -/ke/ class and becomes [+ sonorant] and more homorganic.

In connection with the -/ke/ <> -/tsje/ replacement De Haan (1990) makes mention of the following changes over time:

traditional grammar:
-/ke/ after vowels and after -/r/
'transitional' grammar:
-/ke/ or -/tsje/ after vowels and after -/r/
final grammar:
-/tsje/ after vowels and after -/r/

What do our research data signify in connection with such a grammar development? It appears that the data neatly fit in the scheme of transitional grammar, for the seven underlined nouns in Table 3 all select -/ke/ **or** -/tsje/. The item *spiker* (nail) obtains by far the highest number of -/tsje/ suffixes. Yet, even this noun still selects the 'traditional' -/ke/ in 36% of all cases.

The fit in transitional grammar means that traditional grammar is prescriptive rather than descriptive. The absence of a statistically significant intergenerational effect with Koornstra's data (see Introduction) and the fact that Pée (1938:3-24; 63-69) already noted signs of the -/ke/ <> -/tsje/ replacement more than half a century ago underscores this conclusion.

3.1 Age, gender and language environment

To investigate whether diminutive formation relates to the age, gender and language environment of Frisian children, an analysis of variance (*ANOVA*) was carried out with diminutive formation as dependent variable and the just mentioned three independent variables. Table 4 shows the results.

factor	Ss	Df	F	p
age (GR)	38.46	1	9.25	<.01
gender (SX)	4.50	1	1.08	n.s.
lang. env. (LE)	34.82	2	4.19	<.05

Table 4: *ANOVA* (regression approach) diminutive formation for Frisian children (*n*=202).

The *ANOVA* above demonstrates two statistically significant main effects. None of the interaction effects was statistically significant. In connection with the effect of age, we observe that the Frisian children in grade 8 (mean 14.69) perform slightly better on the diminutive formation test than their Frisian schoolmates in the fifth grade, whose mean score is 13.87.

As regards the effect of the factor language environment, it turns out that the Frisian children's mean score in school category C surpasses the scores in school category B and A. The means were 14.69 (C), 13.94 (B) and 13.98 (A). Tukey's *HSD*

test could not locate a significant difference between any two groups (Alpha .05), but if we group the Frisian children in both categories A and B, a t-test reveals a statistically significant difference ($p<.02$) between the means in the combined category AB (mean 13.96; *sd* 2.26) versus C (mean 14.69; *sd* 1.83).

To investigate the factors which are possibly linked to the achievement of the Dutch children, another *ANOVA* was carried out. The following table gives the outcomes.

factor	Ss	Df	F	p
age (GR)	153.80	1	13.54	<.001
gender (SX)	69.71	1	6.14	<.05
lang. env. (LE)	555.12	2	24.43	<.001
GR x SX	32.68	1	2.88	<.10
GR x LE	87.41	2	3.85	<.05
SX x LE	43.98	2	1.94	n.s.
GR x SX x LE	11.07	2	.49	n.s.

Table 5: *ANOVA* (regression approach) diminutive formation for Dutch children (n=208).

Contrary to the outcomes for the Frisian children, we find significant main effects of all three factors. Language environment shows the strongest effect. This factor explains 17.6% of the variation in diminutive formation[(2)]. Regarding the effect of age, the younger (grade 5) Dutch children's mean score is 7.99, while the older children's average score amounts to 9.70. Dutch girls achieve better compared to boys, the means being 9.48 and 8.14 respectively. Finally, we find substantial differences between the average scores of the Dutch children in the three language environments distinguished. The means for school category A, B and C are 6.74, 8.38 and 10.64. Tukey's *HSD* test indicates that all differences between the groups are statistically significant (Alpha .05).

Among the Dutch children we observe a significant interaction effect between the variables age and language environment. The table below further illustrates this effect.

	language environment A	B	C
age group			
grade 5	6.13	6.73	10.35
grade 8	7.41	10.20	10.95

Table 6: Dutch children's means on diminutive formation test by age and language environment.

To locate the differences between the means of the three language environments per age group, Tukey's *HSD* test has been applied (Alpha .05). As regards fifth-grade Dutch children, it turns out that the means between the school categories A and B differ from the average score in category C. The means obtained in categories A and B do not differ from one another. In grade 8, the only differences between the means are found between school category A on the one hand, and both categories B and C on the other.

To test the differences between the age groups per language environment, 'simple effects' tests have been carried out. These revealed that only the differences between the means obtained in environments A and B were statistically significant (F-values being 6.26 ($p<.05$) and 9.26 ($p<.01$)).

3.2 Attitudes and motivation

In this final section, I will trace the role which social-psychological variables possibly play with respect to the level at which Dutch children acquire the Frisian diminutive system. I will first briefly go into the Dutch children's attitudes and motivation. Thereafter, I will relate their attitudes and motivation to their achievement on the diminutive formation test.

In principle, the questionnaire developed intends to represent one dimension, for a Likert scale typically is supposed to be uni-dimensional. To determine whether this assumption holds, a factor analysis (*PCA*, varimax rotation) has been carried out. Table 7 gives the results.

item number		factor 1 (*GLA*)	factor 2 (*LUA*)
(1)	watch Frisian TV	.62*	.15
(2)	language on sticker	.74*	.07
(3)	Frisian lessons	.74*	.02
(5)	medium of instruction	.85*	.01
(6)	Frisian beautiful	.84*	.07
(7)	identity	.82*	.16
(8)	place names (on signs)	.75*	.04
(10)	Frisian important	.72*	.14
(4)	usage Frisian speaker	.19	.78*
(9)	usage Dutch speaker	.18	.66*
[*= >.50]			
eigen value		4.73	1.12
explained variance		58.5%	

Table 7: Rotated factor matrix.

The table reveals that the items 1, 2, 3, 5, 6, 7, 8, 10 load strongly on factor one, which is denoted as *general language attitude* (*GLA*). The items 4 and 9 load highly on the second factor, which is designated as *language usage attitude* (*LUA*). Factor scores were then calculated by adding the particular items that load on each factor.

In order to evaluate the group of Dutch children's general attitude towards Frisian, I calculated their mean *GLA* score, which amounted to 17.63. The actual *GLA* mean is far below the theoretical mean of the LUA-scale (22.5). Thus, the Dutch children's general attitude towards Frisian is fairly negative. This judgement corroborates earlier findings among primary school children's attitudes towards Frisian (Ytsma 1990).

To indicate the degree in which the Dutch children are motivated to learn Frisian, I calculated their average motivation score, which amounted to 14.24. This mean is far below the theoretical mean of the motivation scores (21), which means that the Dutch children are very poorly motivated.

Finally, I linked the Dutch children's attitudes and motivation to their achievement on the diminutive formation test. The results can be found in Table 8.

	diminutive formation
GLA	.22*
LUA	.00
motivation	-.04

Table 8: Pearson's *r* between *GLA*, *LUA*, motivation and diminutive formation (*n*=195).

Table 8 ascertains that only the correlation between the Dutch children's general language attitude and diminutive formation is statistically significant ($p<.01$). However, the correlation coëfficient is low. On the basis of this weak correlation one can determine that *GLA* explains no more than 4.8% of the variance of the diminutive formation test scores.

4. SUMMARY AND DISCUSSION

On account of the data reported here, one can argue that the Frisian children achieve reasonably well on the diminutive formation test. The oldest Frisian children (grade 8) perform slightly better than those in the fifth grade. This is in line with Dutch studies which put forward that Dutch diminutive formation is only completely mastered at the end of primary school. Interestingly, some Frisian children show typical signs of insecurity. They monitor their own responses and correct themselves. These self-corrections perhaps signify the looseness of the current Frisian diminutive system.

With the Frisian children, there are considerable differences between the various items tested. The vast majority of non-standard suffixation is found with the items ending in -/r/ or in vowels. In this context, traditional -/ke/ is often replaced by -/tsje/. Occasionally, -/tsje/ is even heard more often than -/ke/. This replacement has been noticed before (Breuker 1982), and had already been observed in the Thirties (Pée 1936, 1938). The phenomenon is most likely triggered by the high degree of language contact between Frisian and Dutch, for it occurs precisely in those contexts where Dutch has -/tje/. The influence of Dutch may also account for the finding that, compared with the Frisian children in both other language environments distinguished, those in the least Dutch environment (C) achieved best on the diminutive formation test. On the other hand, internal mechanisms may also play a meaningful role: the replacement enlarges the -/tsje/ class.

Anyway, as to the linguistic manifestation of the developments in the Frisian diminutive formation system, one has to do with a creeping process of language change rather than language loss. Traditional features are not lost, but they are replaced by other ones.

The Dutch children applied the Frisian diminutive forms with great difficulty. Thus, there is little 'language gain'. The variability of their test scores is relatively high. Dutch children characteristically overgeneralized the typical -/ke/ suffix (cf. Boelens 1987). Older Dutch children and girls achieved better than younger Dutch children and boys. But the most crucial effect is of the 'Frisianness' of the child's environment. Dutch children in the most prominent Frisian language environment generally achieved better than those in less Frisian environments. Exposure to the Frisian language, which in the case of the Dutch children most often only implies hearing Frisian (cf. Ytsma 1988), does make a difference indeed.

Dutch children generally displayed a fairly negative attitude towards Frisian and they were only poorly motivated to learn the language. In view of primary education, in which Frisian is an obligatory subject, these social-psychological research findings seem highly relevant.

We found that the *AMTB* items which originally dealt with integrative orientation loaded on the same factor as the items covering instrumental orientation. This outcome is not unique. Empirical research findings of Vousten, Bongaerts and Knops (1989) point in the same direction. Among their dialect learning children who had Dutch as home language, the instrumental-integrative distinction also did not apply. Such findings underscore Knops' remark that the division between integrative and instrumental motivation may be artificial or arbitrary (Knops 1988:88).

Both language attitudes and motivation were not strongly linked to the Dutch children's acquisition of the Frisian diminutive system. The variable with the most predictive power, the general attitude towards Frisian, could explain only less than 5% of the achievement on the test concerned. This confirms earlier analyses on the relation between Dutch children's language attitudes and their lexical knowledge of Frisian (Ytsma 1991). All in all, such data are in support of the conclusion of Oller, Hudson and Liu (1977:3,4), who stated that the correlations between attitudes and attained second language proficiency are often low. They based their conclusion on Canadian studies on French as a second language. As to the present study, which focussed on a much less prestigious second language, a similar conclusion emerges.

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Notes:

1. A one-way analysis of variance has been carried out, $F = 3.18$, $p < .10$). The means for the three age groups were 16.8, 14.9 and 14.3 respectively.

2. Dividing the between-group Sum of Squares (*SS*) by the total *SS* gives the proportion of explained variance (Kerlinger 1981:230-231). Here: 555.12/3155.69= .176.

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